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Reporting from and review of Parties included in Annex I to the Convention

Report on national greenhouse gas inventory data from Parties included in Annex I to the Convention for the period 1990–2014

National greenhouse gas inventory data for the period 1990–2014

Report by the secretariat*

Summary

Forty-two Parties included in Annex I to the Convention (Annex I Parties) submitted their greenhouse gas (GHG) inventory common reporting format (CRF) tables and national inventory reports (NIRs) in 2016. By the deadline of 15 April 2016, CRF tables from 38 Parties and NIRs from 33 Parties had been received. Over the period 1990–2014, total aggregate GHG emissions without emissions and removals from land use, land-use change and forestry (LULUCF) for all Annex I Parties decreased by 11.3 per cent, while total GHG emissions and removals with LULUCF decreased by 15.8 per cent. For Annex I Parties with economies in transition, GHG emissions without and with LULUCF decreased by 37.2 per cent and 47.0 per cent, respectively. For Annex I Parties that do not have economies in transition, GHG emissions without and with LULUCF increased by 1.4 per cent and 0.7 per cent, respectively. The information in this document is based on information in the national GHG inventory submissions of Annex I Parties received as at 16 September 2016. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was still ongoing; therefore, the data included in this document may not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.

* This document was submitted after the due date in order to take into account the latest submissions from Parties.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by decision 24/CP.19, requested Parties included in Annex I to the Convention (Annex I Parties) to submit national inventory data on greenhouse gas (GHG) emissions by sources and removals by sinks by 15 April each year. By decision 13/CP.20, paragraphs 8 and 10, the COP requested the secretariat to compile and summarize information on GHG inventory data submitted by Annex I Parties, inter alia, for consideration by the COP and the subsidiary bodies.

B. Scope of the note

2. This document shows the status of reporting of GHG inventories by Annex I Parties in 2016 (chapter II) and provides a summary of the latest available data on GHG emissions and removals for the period 1990–2014 (chapter III). Data are provided for carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), as well as for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), unspecified mix of HFCs and PFCs (MIX) and nitrogen trifluoride (NF₃) taken together, and, where Parties have elected to report them, indirect CO₂ emissions from the atmospheric oxidation of CH₄, carbon monoxide and non-methane volatile organic compounds. Data are provided on total¹ aggregate² GHG emissions, both without and with net GHG emissions and removals from land use, land-use change and forestry (LULUCF).

3. The information provided in this document is based on information in the national GHG inventories received from 42 Annex I Parties (see table 1) as at 16 September 2016.

4. At the time of the publication of this document, the annual review process for GHG inventories from Annex I Parties was still ongoing; therefore, the data presented here may not reflect the latest information provided by Parties. The latest GHG inventory data are available on the UNFCCC website.³

C. Possible action by the Subsidiary Body for Implementation

5. The Subsidiary Body for Implementation may wish to take note of the information contained in this document and seek further guidance from the COP, as appropriate.

II. Status of reporting

A. Timeliness and completeness of submissions

6. According to the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on

¹ The term “total” implies that emissions from the sectors of the common reporting format are summed; the inclusion of emissions from land use, land-use change and forestry in the sum is indicated separately; unless stated otherwise, totals do not include indirect CO₂ emissions.

² The term “aggregate” implies that GHG emissions and removals are calculated as a weighted sum of CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, MIX and NF₃ using the global warming potential values agreed under the Convention.

³ <<http://unfccc.int/9492.php>>.

annual greenhouse gas inventories” (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines),⁴ Annex I Parties are required to submit annually a national inventory report (NIR) and common reporting format (CRF) tables containing data from the base year up to two years prior to the year of submission. In 2016, 42 Annex I Parties provided GHG data for all years from 1990⁵ to 2014.

7. By 15 April 2016, CRF tables had been received from 37 Parties and NIRs had been received from 33 Parties. Within six weeks after 15 April 2016, a total of 40 Parties⁶ had submitted their CRF tables and 39 Parties had submitted their NIRs. The dates of the initial submissions of the CRF tables are shown in table 1.

Table 1
Greenhouse gas inventory submissions from Annex I Parties in 2016

| <i>Party</i> | <i>CRF tables submission date^a</i> | <i>Party</i> | <i>CRF tables submission date^a</i> |
|----------------|-----------------------------------------------|--------------------|-----------------------------------------------|
| Australia | 27 May 2016 | Liechtenstein | 15 April 2016 |
| Austria | 14 April 2016 | Lithuania | 15 April 2016 |
| Belarus | 10 June 2016 | Luxembourg | 15 April 2016 |
| Belgium | 15 April 2016 | Malta | 14 April 2016 |
| Bulgaria | 15 April 2016 | Monaco | |
| Canada | 14 April 2016 | Netherlands | 15 April 2016 |
| Croatia | 15 April 2016 | New Zealand | 20 May 2016 |
| Cyprus | 13 April 2016 | Norway | 15 April 2016 |
| Czechia | 15 April 2016 | Poland | 15 April 2016 |
| Denmark | 15 April 2016 | Portugal | 15 April 2016 |
| Estonia | 15 April 2016 | Romania | 15 April 2016 |
| European Union | 15 April 2016 | Russian Federation | 15 April 2016 |
| Finland | 15 April 2016 | Slovakia | 15 April 2016 |
| France | 15 April 2016 | Slovenia | 15 April 2016 |
| Germany | 15 April 2016 | Spain | 15 April 2016 |
| Greece | 15 April 2016 | Sweden | 15 April 2016 |
| Hungary | 15 April 2016 | Switzerland | 15 April 2016 |
| Iceland | 15 April 2016 | Turkey | 15 April 2016 |
| Ireland | 15 June 2016 | Ukraine | 24 May 2016 |
| Italy | 15 April 2016 | United Kingdom | 15 April 2016 |
| Japan | 14 April 2016 | United States | 15 April 2016 |
| Latvia | 15 April 2016 | | |

Abbreviation: CRF = common reporting format.

^a Dates after 15 April 2016 are shown in italics. The dates of submission of the national inventory reports may be different. Blank cells indicate that no submission had been received as at 16 September 2016.

⁴ Decision 24/CP.19, annex I.

⁵ Unless otherwise specified, for certain Parties base year data are used instead of 1990 data. The Parties that may use a base year other than 1990, as stipulated in decisions 9/CP.2 and 11/CP.4, provided data for their respective base years. Such Parties and their base years are Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986).

⁶ When making their submissions, some Parties referred to technical problems that they encountered with the reporting software. In decision 20/CP.21, the COP noted that the CRF Reporter was not yet fully functioning.

8. After the initial submissions, 36 Parties submitted revised versions of their CRF tables and 31 Parties resubmitted their NIRs.

B. Recalculations

9. According to the UNFCCC Annex I inventory reporting guidelines, Parties should, where necessary, conduct recalculations in order to improve the quality of their emission estimates and ensure the consistency of the time series.

10. In 2016, 39 Annex I Parties⁷ reported recalculations that had an impact on their estimated GHG emissions for 1990 (see table 2). The recalculations resulted from changes in activity data, emission factors and methodologies. For total aggregate GHG emissions without LULUCF, the change was less than 1 per cent for 29 Parties and more than 3 per cent for 4 Parties. For total aggregate GHG emissions with LULUCF, the change was less than 1 per cent for 24 Parties and more than 3 per cent for 7 Parties.

Table 2
Inventory recalculations by Annex I Parties in 2016

| <i>Party</i> | <i>Impact on GHG emissions for 1990 without LULUCF (%)^a</i> | <i>Impact on GHG emissions for 1990 with LULUCF (%)^a</i> |
|----------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Australia | -2.3 | 2.9 |
| Austria | 0.2 | 0.5 |
| Belarus | | |
| Belgium | -0.7 | -0.8 |
| Bulgaria | -5.1 | -6.6 |
| Canada | 0.0 | 0.1 |
| Croatia | | |
| Cyprus | 2.4 | 2.7 |
| Czechia | 1.0 | 1.0 |
| Denmark | -0.5 | -1.2 |
| Estonia | -0.2 | -1.7 |
| European Union | -0.4 | -0.3 |
| Finland | 0.0 | -0.4 |
| France | -0.6 | 0.7 |
| Germany | -0.1 | 0.0 |
| Greece | -0.2 | -0.1 |
| Hungary | -0.1 | 0.9 |
| Iceland | -5.6 | -1.4 |
| Ireland | -1.0 | 1.8 |
| Italy | 0.2 | 0.0 |
| Japan | 0.0 | 0.0 |
| Latvia | 0.3 | 3.2 |
| Liechtenstein | -0.2 | -0.2 |
| Lithuania | -1.3 | -0.7 |
| Luxembourg | -0.1 | -2.2 |

⁷ In Switzerland's GHG inventory, recalculations showed identical values to previous estimates. Recalculations for Belarus, Croatia and Monaco (without and with LULUCF) were not available.

| <i>Party</i> | <i>Impact on GHG emissions for 1990 without LULUCF (%)^a</i> | <i>Impact on GHG emissions for 1990 with LULUCF (%)^a</i> |
|--------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Malta | 0.0 | 0.0 |
| Monaco | | |
| Netherlands | 0.9 | 1.1 |
| New Zealand | -1.3 | -3.1 |
| Norway | -0.2 | -0.1 |
| Poland | -0.2 | -0.5 |
| Portugal | 0.1 | 0.0 |
| Romania | 2.2 | 2.4 |
| Russian Federation | 0.0 | -0.9 |
| Slovakia | -1.7 | -1.8 |
| Slovenia | 0.5 | -5.3 |
| Spain | -1.7 | -2.5 |
| Sweden | 0.1 | 13.0 |
| Switzerland | 0.0 | 0.0 |
| Turkey | -4.8 | -5.6 |
| Ukraine | 3.6 | 5.7 |
| United Kingdom | -0.9 | -1.4 |
| United States | 2.1 | 0.3 |

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

^a Blank cells indicate that recalculations were not available.

11. Total aggregate GHG emissions for Annex I Parties were not presented in the 2015 report on GHG data⁸ because submissions had been received from only 30 Parties.⁹ Thus, it was not possible to carry out the following:

(a) A comparison of estimates reported in 2015 and 2016 of the total aggregate GHG emissions of Annex I Parties in 1990;

(b) A comparison of the changes in the total aggregate GHG emissions from 1990 to the latest available year of Annex I Parties reported in 2015 and 2016.

III. Overview of emission trends and sources in Annex I Parties

A. Total aggregate greenhouse gas emissions

12. Figures 1 and 2 show the trends in total aggregate GHG emissions from 1990 to 2014 for all Annex I Parties taken together, for Annex I Parties with economies in transition (Annex I EIT Parties) and for Annex I Parties that do not have economies in transition.

13. From 1990 to 2014, total aggregate GHG emissions without emissions and removals from LULUCF for all Annex I Parties decreased by 11.3 per cent, from 19,949.10 Mt CO₂ eq to 17,689.61 Mt CO₂ eq. During the same period, total aggregate GHG emissions with

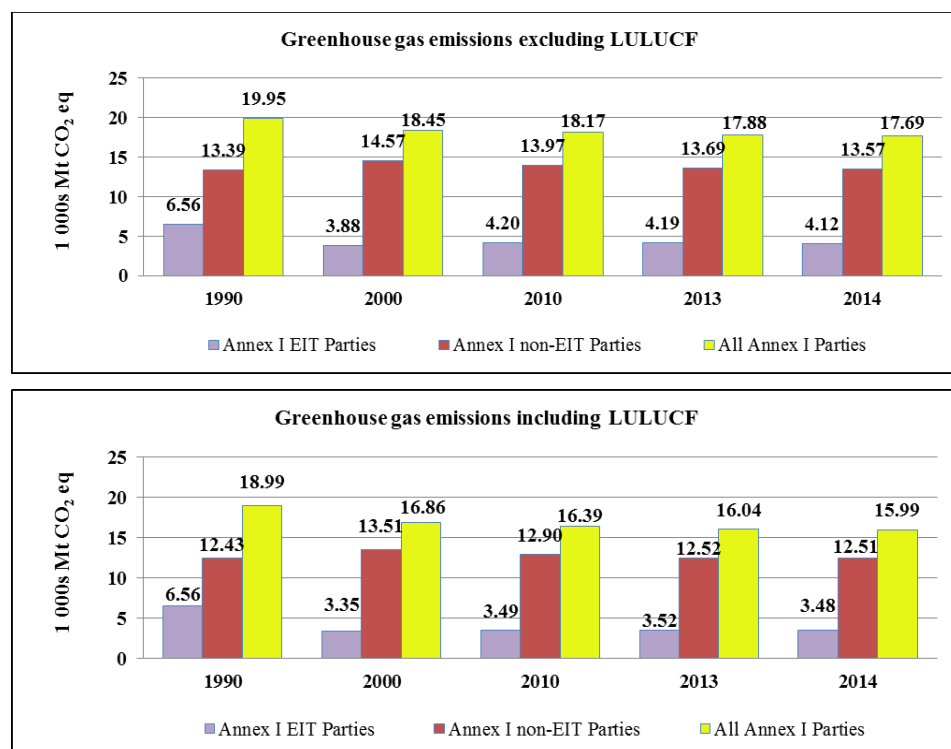
⁸ FCCC/SBI/2015/21.

⁹ This was due to a delay in the availability of the CRF Reporter. In accordance with decision 13/CP.20, Annex I Parties may submit their CRF tables after 15 April in 2015, but no later than the corresponding delay in the CRF Reporter availability.

LULUCF decreased by 15.8 per cent, from 18,988.41 Mt CO₂ eq to 15,989.76 Mt CO₂ eq. From 2000 to 2014, GHG emissions without and with LULUCF decreased by 4.1 per cent and 5.2 per cent, respectively. Between 2013 and 2014, GHG emissions decreased by 1.0 per cent without LULUCF and by 0.3 per cent with LULUCF.

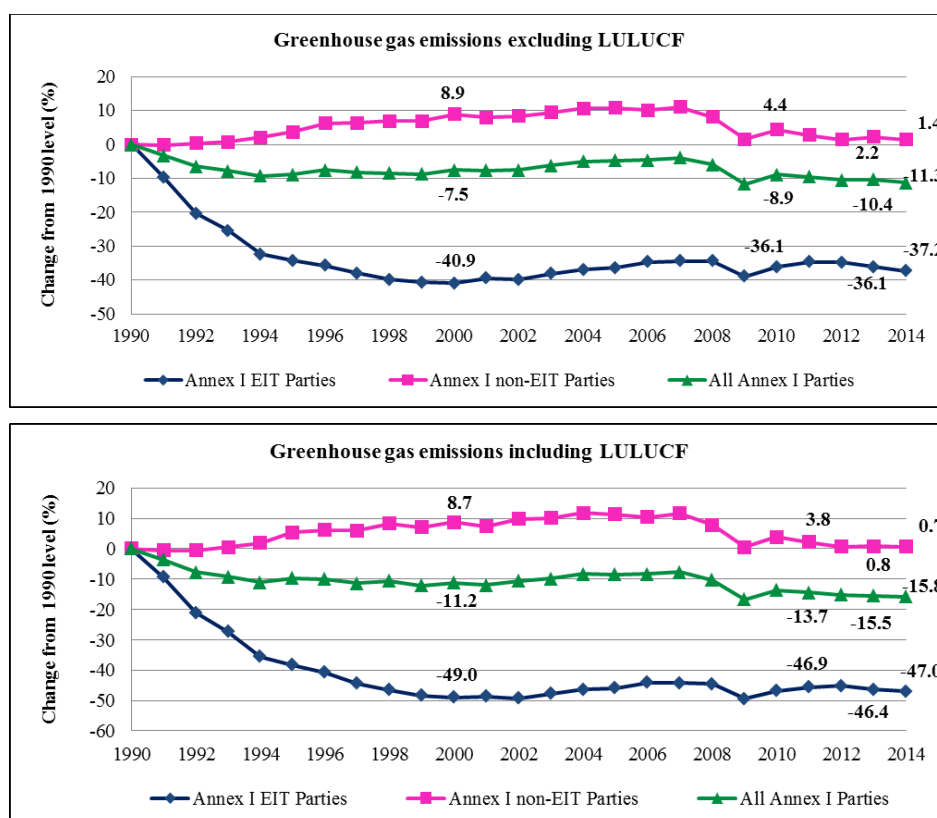
Figure 1

Greenhouse gas emissions of Annex I Parties, 1990, 2000, 2010, 2013 and 2014



Abbreviations: EIT = economies in transition, LULUCF = land use, land-use change and forestry.

Figure 2
Changes in greenhouse gas emissions of Annex I Parties, 1990–2014



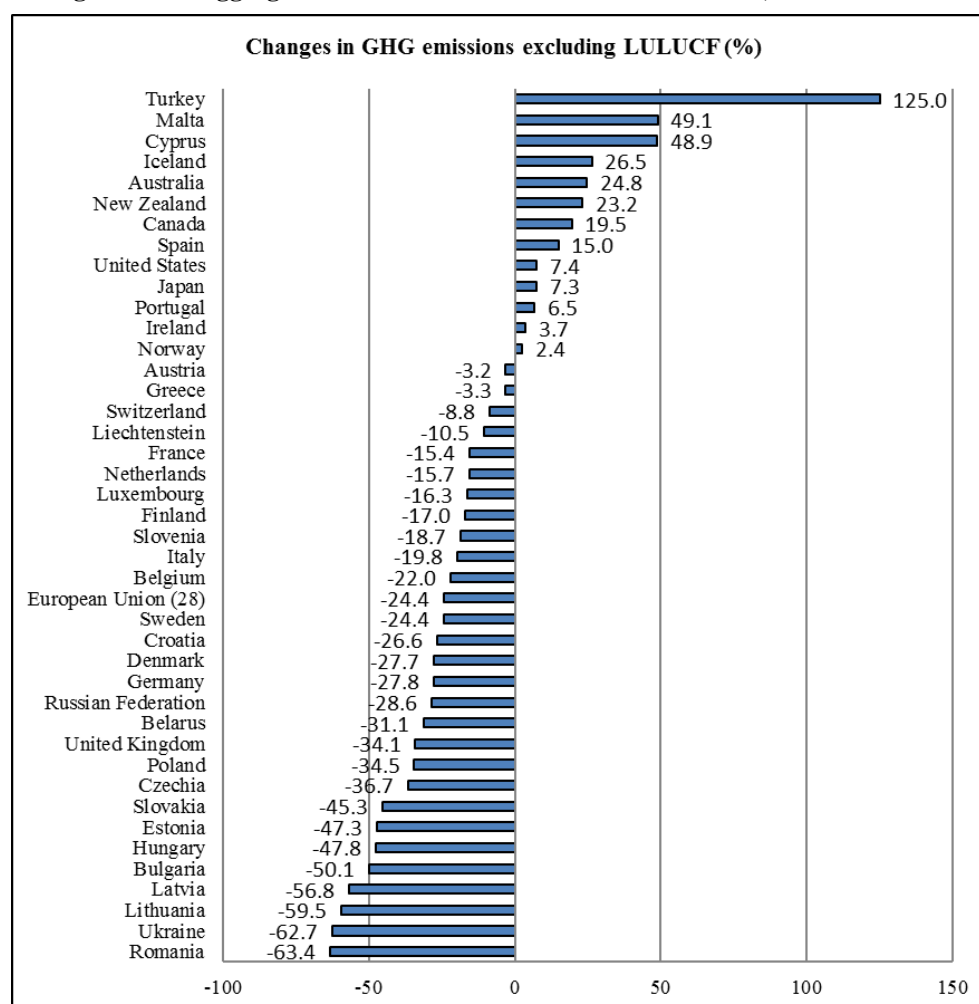
Abbreviations: EIT = economies in transition, LULUCF = land use, land-use change and forestry.

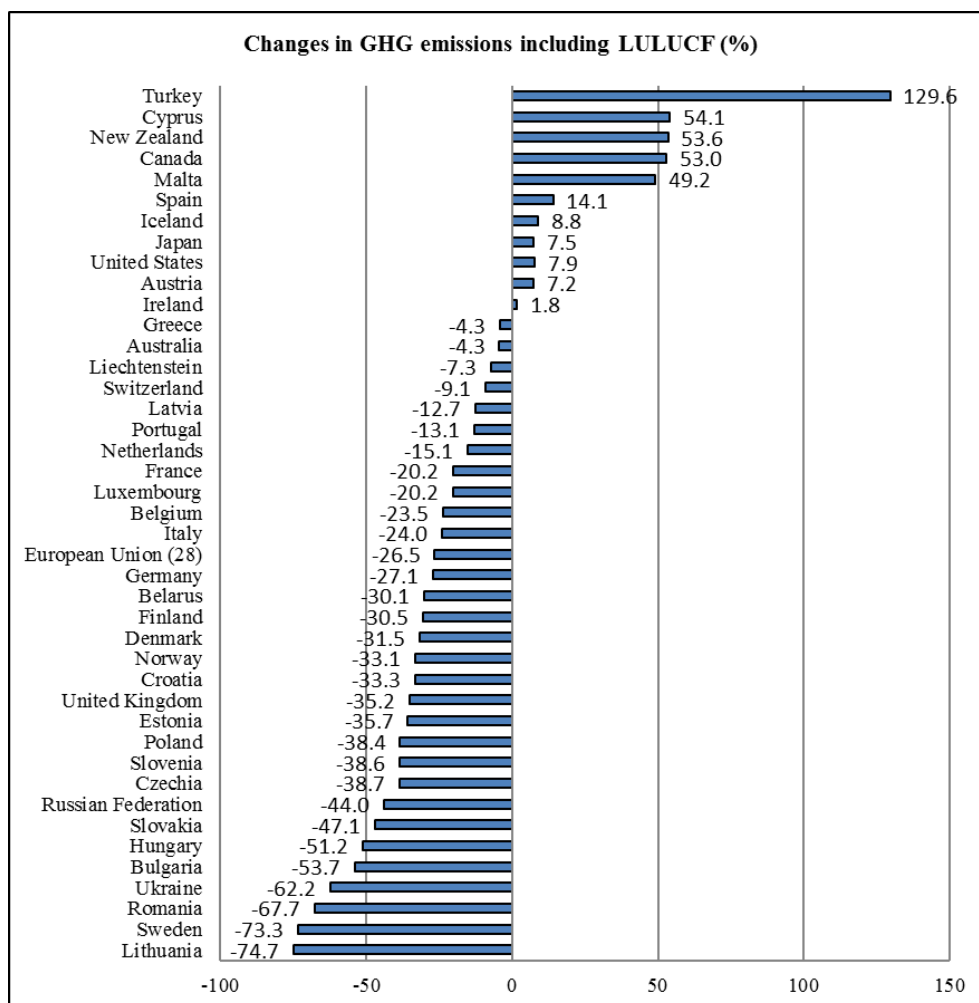
14. For Annex I EIT Parties, GHG emissions from 1990 to 2014 decreased by 37.2 per cent without LULUCF and by 47.0 per cent with LULUCF. From 2000 to 2014, GHG emissions without and with LULUCF increased by 6.2 per cent and 3.9 per cent, respectively. Between 2013 and 2014, GHG emissions decreased by 1.7 per cent without LULUCF and by 1.2 per cent with LULUCF.

15. For Annex I Parties that do not have economies in transition, from 1990 to 2014 GHG emissions increased by 1.4 per cent without LULUCF and by 0.7 per cent with LULUCF. From 2000 to 2014, GHG emissions without and with LULUCF decreased by 6.9 per cent and 7.4 per cent, respectively. Between 2013 and 2014, GHG emissions showed a decrease of 0.8 per cent without LULUCF and of 0.1 per cent with LULUCF.

16. The changes in total aggregate GHG emissions over the period 1990–2014 varied considerably among Parties (see figure 3). The largest decrease in emissions without LULUCF was in Romania (by 63.4 per cent), while the largest decrease in emissions with LULUCF was in Lithuania (by 74.7 per cent). On the other hand, the greatest increase in emissions without and with LULUCF was in Turkey (by 125.0 per cent and 129.6 per cent, respectively).

Figure 3

Changes in total aggregate emissions of individual Annex I Parties, 1990–2014



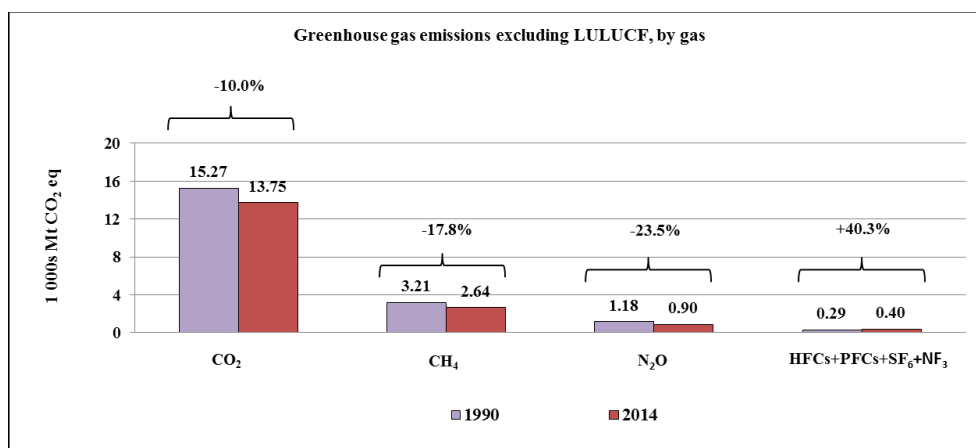
Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

B. Greenhouse gas emissions by gas

17. Throughout the period 1990–2014, CO₂ accounted for the largest share of total emissions, contributing 76.6 per cent in 1990 and 77.7 per cent in 2014. CH₄ was the second-highest contributor to total GHG emissions (16.1 per cent in 1990 and 14.9 per cent in 2014), followed by N₂O (5.9 per cent in 1990 and 5.1 per cent in 2014). The emissions of HFCs, PFCs, SF₆, MIX and NF₃ taken together contributed less than 2.5 per cent of the total GHG emissions in both years.

18. Figure 4 shows the contribution of each GHG to the total emissions without LULUCF for 1990 and 2014 and the changes in the total emissions of each GHG over the period 1990–2014. Emissions of CO₂, CH₄ and N₂O decreased, while emissions of HFCs, PFCs, SF₆, MIX and NF₃ taken together increased by 40.3 per cent.

Figure 4
Greenhouse gas emissions excluding land use, land-use change and forestry of Annex I Parties by gas, 1990 and 2014



Abbreviation: LULUCF = land use, land-use change and forestry.

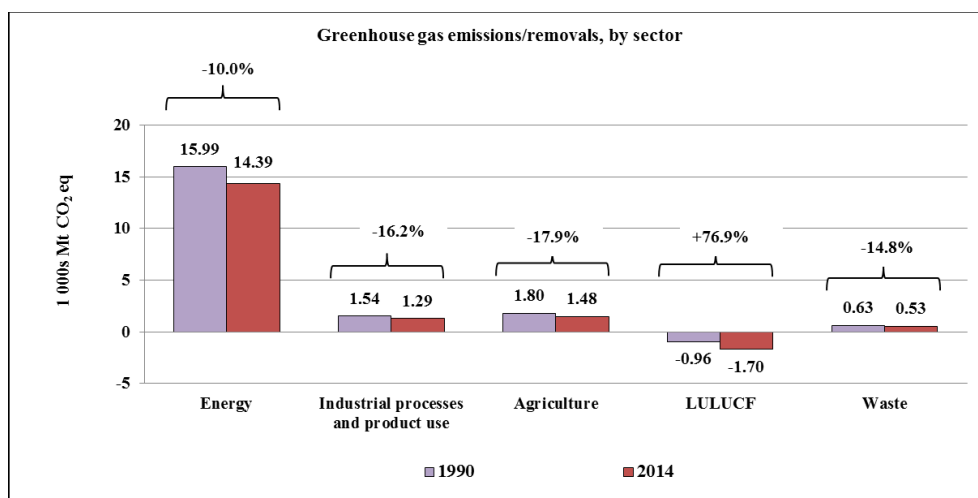
19. Between 2013 and 2014, emissions of CO₂ and CH₄ decreased by 1.4 per cent and 0.3 per cent, respectively. During the same period, emissions of N₂O increased by 0.1 per cent and emissions of HFCs, PFCs, SF₆, MIX and NF₃ taken together increased by 2.9 per cent.

C. Greenhouse gas emissions by sector

20. From 1990 to 2014, emissions from the energy, industrial processes and product use, agriculture and waste sectors decreased (see figure 5). The agriculture sector experienced the largest relative decrease in emissions (by 17.9 per cent), followed by the industrial processes and product use, waste and energy sectors. Over the same period, net GHG removals from LULUCF increased by 76.9 per cent, from -960.69 Mt CO₂ eq to -1,699.85 Mt CO₂ eq.

21. Between 2013 and 2014, emissions from the energy sector decreased by 1.4 per cent. Emissions from the industrial processes and product use, agriculture and waste sectors increased by 0.6 per cent, 0.3 per cent and 0.3 per cent, respectively. Net GHG removals from LULUCF decreased by 7.3 per cent.

Figure 5
Greenhouse gas emissions and removals of Annex I Parties by sector, 1990 and 2014^a

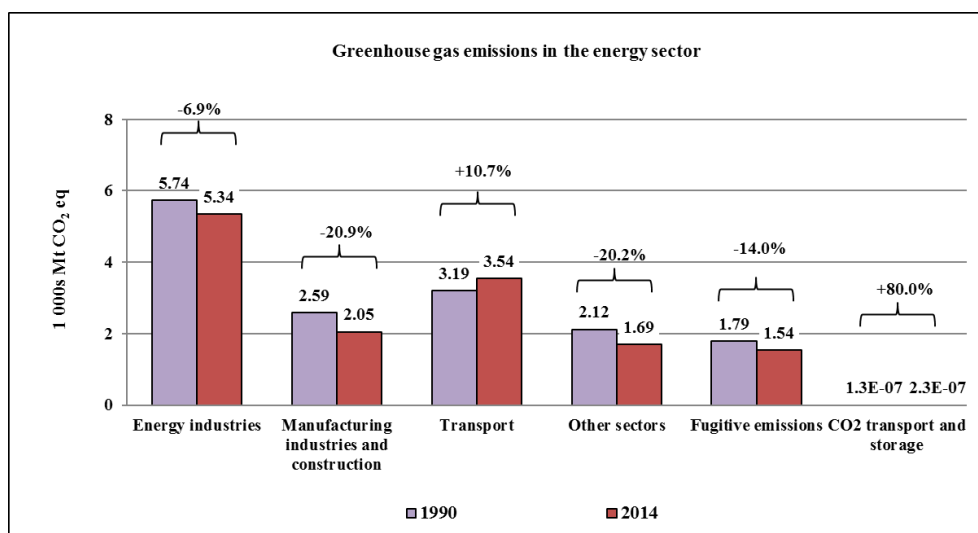


Abbreviation: LULUCF = land use, land-use change and forestry.

^a The sector other is not included in this figure because its contribution to the total GHG emissions is very small. The emissions from this sector decreased by 27.2 per cent between 1990 and 2014.

22. Within the energy sector, from 1990 to 2014, GHG emissions decreased in all subsectors except transport and CO₂ transport and storage, where emissions increased by 10.7 per cent and 80.0 per cent, respectively (see figure 6). The largest relative emission reduction occurred in manufacturing industries and construction (where emissions decreased by 20.9 per cent).

Figure 6
Greenhouse gas emissions of Annex I Parties in the energy sector, 1990 and 2014

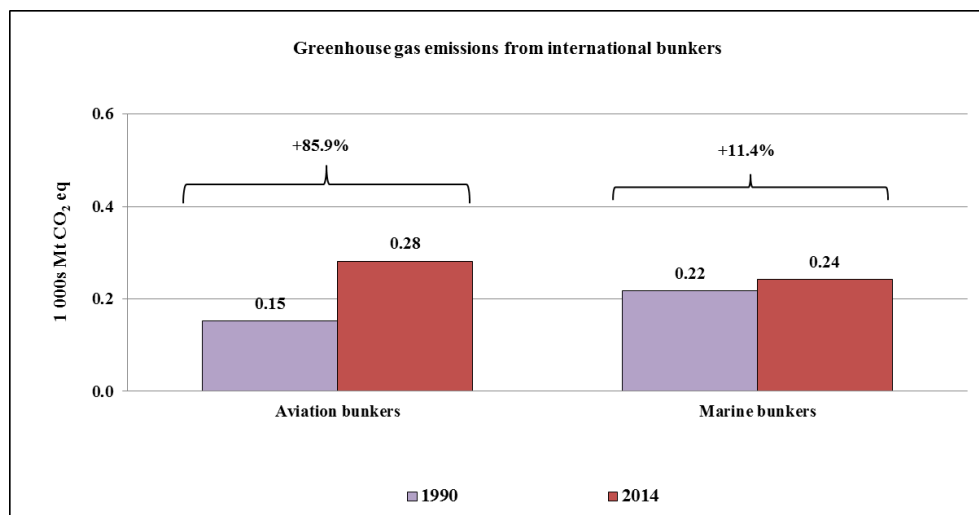


23. Between 2013 and 2014, emissions from all energy subsectors, except CO₂ transport and storage (namely energy industries, manufacturing industries and construction, transport, fugitive emissions and other sectors) decreased.

24. Over the period 1990–2014, emissions from international bunkers increased, by 85.9 per cent for aviation and by 11.4 per cent for navigation (see figure 7).

Figure 7

Greenhouse gas emissions from international bunker fuels for Annex I Parties, 1990 and 2014



25. Between 2013 and 2014, emissions from international bunkers increased, by 2.9 per cent for aviation and by 3.9 per cent for navigation.

D. Emission data for individual Annex I Parties

26. Tables 3–15 show detailed GHG data for individual Annex I Parties. Total aggregate GHG emissions without and with emissions and removals from LULUCF are provided in tables 3 and 4; emissions of CO₂, CH₄ and N₂O (without and with emissions and removals from LULUCF) are provided in tables 5–10; emissions of HFCs, PFCs, SF₆, MIX and NF₃ taken together are provided in table 11; emissions and removals from LULUCF are provided in tables 12–14; and indirect CO₂ emissions are provided in table 15.

27. Blank cells in the tables denote that either data were not available or notation keys, such as “NO” (not occurring), “NE” (not estimated), “NA” (not applicable), “IE” (included elsewhere) or “C” (confidential), were used to report emission data. Negative values denote removals; positive values denote emissions.

28. The changes in emissions from 1990 to 2014 were calculated using the exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the tables. An en dash (–) signifies a percentage change exceeding 10,000 per cent.

Table 3
Total aggregate anthropogenic emissions of CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, MIX and NF₃ without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|-----------|-----------|-----------|-----------|------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 418 623 | 483 446 | 533 917 | 526 883 | 522 397 | 24.8 |
| Austria | 78 845 | 80 429 | 84 946 | 80 043 | 76 333 | -3.2 |
| Belarus ^a | 133 457 | 77 960 | 91 184 | 93 037 | 91 896 | -31.1 |
| Belgium | 146 021 | 149 213 | 133 258 | 119 375 | 113 867 | -22.0 |
| Bulgaria ^{a, b} | 114 578 | 58 265 | 59 820 | 54 946 | 57 197 | -50.1 |
| Canada | 612 866 | 744 241 | 706 403 | 731 424 | 732 419 | 19.5 |
| Croatia ^a | 31 205 | 25 173 | 27 280 | 23 771 | 22 899 | -26.6 |
| Cyprus | 5 638 | 8 339 | 9 521 | 7 963 | 8 394 | 48.9 |
| Czechia ^a | 195 345 | 147 993 | 137 687 | 128 390 | 123 651 | -36.7 |
| Denmark | 70 246 | 70 131 | 62 944 | 54 984 | 50 785 | -27.7 |
| Estonia ^a | 39 965 | 17 062 | 19 912 | 21 677 | 21 059 | -47.3 |
| European Union ^c | 5 656 504 | 5 161 669 | 4 775 529 | 4 463 078 | 4 278 052 | -24.4 |
| Finland | 71 077 | 69 855 | 75 835 | 63 197 | 59 029 | -17.0 |
| France | 549 065 | 556 461 | 518 940 | 491 159 | 464 418 | -15.4 |
| Germany | 1 246 101 | 1 041 064 | 939 372 | 943 520 | 900 202 | -27.8 |
| Greece | 104 827 | 127 688 | 118 733 | 104 669 | 101 403 | -3.3 |
| Hungary ^{a, b} | 109 636 | 73 557 | 65 524 | 57 554 | 57 225 | -47.8 |
| Iceland | 3 634 | 3 963 | 4 730 | 4 535 | 4 597 | 26.5 |
| Ireland | 56 088 | 69 251 | 62 235 | 58 482 | 58 189 | 3.7 |
| Italy | 521 921 | 554 479 | 508 424 | 438 887 | 418 587 | -19.8 |
| Japan | 1 270 743 | 1 386 714 | 1 304 903 | 1 407 883 | 1 363 862 | 7.3 |
| Latvia ^a | 26 256 | 10 434 | 12 362 | 11 415 | 11 353 | -56.8 |
| Liechtenstein | 229 | 248 | 231 | 235 | 205 | -10.5 |
| Lithuania ^a | 47 209 | 18 739 | 20 163 | 19 256 | 19 139 | -59.5 |
| Luxembourg | 12 871 | 9 743 | 12 221 | 11 207 | 10 771 | -16.3 |
| Malta | 2 000 | 2 626 | 3 099 | 2 954 | 2 983 | 49.1 |
| Monaco | | | | | | |
| Netherlands | 221 516 | 219 916 | 213 523 | 194 825 | 186 845 | -15.7 |
| New Zealand | 65 828 | 76 385 | 78 942 | 80 298 | 81 104 | 23.2 |
| Norway | 51 913 | 54 869 | 55 272 | 53 552 | 53 156 | 2.4 |
| Poland ^{a, b} | 579 869 | 392 276 | 403 599 | 393 092 | 380 038 | -34.5 |
| Portugal | 60 487 | 83 798 | 70 232 | 64 751 | 64 395 | 6.5 |
| Romania ^{a, b} | 304 651 | 142 317 | 119 056 | 111 837 | 111 507 | -63.4 |
| Russian Federation ^a | 3 940 191 | 2 432 751 | 2 772 489 | 2 815 190 | 2 812 310 | -28.6 |
| Slovakia ^a | 74 272 | 49 712 | 46 483 | 42 792 | 40 658 | -45.3 |
| Slovenia ^{a, b} | 20 394 | 19 126 | 19 619 | 18 314 | 16 582 | -18.7 |
| Spain | 285 934 | 385 119 | 360 800 | 327 447 | 328 926 | 15.0 |
| Sweden | 71 917 | 68 869 | 64 997 | 55 940 | 54 383 | -24.4 |
| Switzerland | 53 314 | 52 314 | 54 363 | 52 508 | 48 605 | -8.8 |
| Turkey ^d | 207 773 | 296 811 | 395 283 | 438 820 | 467 550 | 125.0 |
| Ukraine ^a | 945 616 | 412 807 | 400 607 | 399 741 | 353 039 | -62.7 |
| United Kingdom | 799 838 | 717 281 | 613 863 | 569 783 | 527 203 | -34.1 |
| United States | 6 397 144 | 7 258 973 | 6 985 457 | 6 799 979 | 6 870 446 | 7.4 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 29 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 13 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 4

Total aggregate anthropogenic emissions of CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, MIX and NF₃ with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|---------------------------------|-----------------------|-----------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 546 839 | 548 877 | 554 780 | 529 214 | 523 107 | -4.3 |
| Austria | 65 992 | 63 512 | 78 421 | 74 841 | 70 774 | 7.2 |
| Belarus ^a | 109 074 | 51 714 | 66 137 | 71 302 | 76 264 | -30.1 |
| Belgium | 143 679 | 147 474 | 129 283 | 115 364 | 109 847 | -23.5 |
| Bulgaria ^{a, b} | 99 303 | 48 134 | 50 570 | 44 838 | 45 933 | -53.7 |
| Canada | 525 677 | 662 625 | 761 036 | 701 792 | 804 212 | 53.0 |
| Croatia ^a | 24 557 | 17 038 | 20 122 | 17 301 | 16 384 | -33.3 |
| Cyprus | 5 025 | 7 780 | 8 881 | 7 311 | 7 743 | 54.1 |
| Czechia ^a | 188 877 | 139 205 | 130 510 | 120 473 | 115 858 | -38.7 |
| Denmark | 76 492 | 74 892 | 64 459 | 57 448 | 52 367 | -31.5 |
| Estonia ^a | 31 839 | 18 017 | 14 572 | 21 028 | 20 482 | -35.7 |
| European Union ^c | 5 403 843 | 4 845 604 | 4 453 449 | 4 142 068 | 3 970 032 | -26.5 |
| Finland | 55 049 | 45 521 | 48 687 | 42 862 | 38 249 | -30.5 |
| France | 518 484 | 523 702 | 480 170 | 437 630 | 413 772 | -20.2 |
| Germany | 1 214 822 | 1 003 112 | 923 049 | 929 203 | 885 226 | -27.1 |
| Greece | 102 548 | 125 803 | 115 473 | 101 521 | 98 167 | -4.3 |
| Hungary ^{a, b} | 107 915 | 73 341 | 61 813 | 54 456 | 52 632 | -51.2 |
| Iceland | 15 129 | 15 512 | 16 587 | 16 407 | 16 466 | 8.8 |
| Ireland | 62 310 | 75 658 | 67 495 | 63 420 | 63 411 | 1.8 |
| Italy | 515 851 | 535 489 | 474 065 | 408 063 | 391 972 | -24.0 |
| Japan | 1 211 448 | 1 299 902 | 1 235 779 | 1 342 836 | 1 302 399 | 7.5 |
| Latvia ^a | 17 835 | 3 738 | 13 936 | 12 623 | 15 574 | -12.7 |
| Liechtenstein | 234 | 256 | 246 | 246 | 217 | -7.3 |
| Lithuania ^a | 43 639 | 9 791 | 9 303 | 9 654 | 11 030 | -74.7 |
| Luxembourg | 12 923 | 9 041 | 12 068 | 10 669 | 10 310 | -20.2 |
| Malta | 1 998 | 2 623 | 3 096 | 2 951 | 2 980 | 49.2 |
| Monaco | | | | | | |
| Netherlands | 227 597 | 226 121 | 219 530 | 201 136 | 193 213 | -15.1 |
| New Zealand | 36 901 | 45 947 | 49 676 | 55 258 | 56 690 | 53.6 |
| Norway | 41 442 | 31 297 | 29 401 | 27 209 | 27 715 | -33.1 |
| Poland ^{a, b} | 563 876 | 358 861 | 370 991 | 352 232 | 347 534 | -38.4 |
| Portugal | 62 235 | 77 794 | 58 827 | 56 266 | 54 096 | -13.1 |
| Romania ^{a, b} | 288 324 | 119 499 | 100 559 | 93 604 | 93 249 | -67.7 |
| Russian Federation ^a | 4 105 091 | 2 086 058 | 2 224 828 | 2 290 653 | 2 299 275 | -44.0 |
| Slovakia ^a | 65 280 | 39 994 | 40 470 | 34 721 | 34 536 | -47.1 |
| Slovenia ^{a, b} | 15 770 | 11 142 | 12 396 | 11 419 | 9 676 | -38.6 |
| Spain | 260 568 | 350 456 | 327 451 | 295 338 | 297 426 | 14.1 |
| Sweden | 34 945 | 30 733 | 20 119 | 13 691 | 9 316 | -73.3 |
| Switzerland | 52 430 | 57 223 | 52 266 | 50 691 | 47 656 | -9.1 |
| Turkey ^d | 177 544 | 260 596 | 348 089 | 380 398 | 407 670 | 129.6 |
| Ukraine ^a | 899 589 | 371 767 | 369 138 | 385 188 | 340 125 | -62.2 |
| United Kingdom | 800 089 | 714 359 | 606 053 | 561 157 | 518 237 | -35.2 |
| United States | 5 659 192 | 6 575 954 | 6 219 033 | 6 040 395 | 6 107 976 | 7.9 |

Number of Parties showing a decrease in emissions by more than 1 per cent:

31

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|------|------|------|------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 11 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 5
**Total anthropogenic CO₂ emissions without emissions/removals from land use,
land-use change and forestry, 1990, 2000, 2010, 2013 and 2014**

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|---------------------------------|-----------------------|-----------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 278 266 | 349 885 | 406 201 | 396 914 | 393 127 | 41.3 |
| Austria | 62 297 | 66 275 | 72 532 | 67 957 | 64 263 | 3.2 |
| Belarus ^a | 100 438 | 53 687 | 61 632 | 61 511 | 60 616 | –39.6 |
| Belgium | 119 983 | 126 315 | 114 155 | 101 745 | 96 325 | –19.7 |
| Bulgaria ^{a, b} | 87 956 | 45 041 | 47 588 | 42 480 | 45 083 | –48.7 |
| Canada | 463 493 | 572 290 | 555 004 | 573 094 | 574 100 | 23.9 |
| Croatia ^a | 23 390 | 19 789 | 21 184 | 18 359 | 17 607 | –24.7 |
| Cyprus | 4 663 | 7 140 | 8 005 | 6 449 | 6 878 | 47.5 |
| Czechia ^a | 161 668 | 125 848 | 115 771 | 106 491 | 101 154 | –37.4 |
| Denmark | 54 306 | 54 149 | 48 993 | 41 537 | 37 461 | –31.0 |
| Estonia ^a | 36 666 | 15 141 | 17 834 | 19 566 | 18 919 | –48.4 |
| European Union ^c | 4 462 205 | 4 165 145 | 3 933 291 | 3 646 390 | 3 463 398 | –22.4 |
| Finland | 56 951 | 56 973 | 63 828 | 51 835 | 47 598 | –16.4 |
| France | 400 653 | 417 117 | 394 236 | 369 986 | 341 153 | –14.9 |
| Germany | 1 050 959 | 899 204 | 832 220 | 835 746 | 792 859 | –24.6 |
| Greece | 83 404 | 103 020 | 97 035 | 82 911 | 79 628 | –4.5 |
| Hungary ^{a, b} | 85 194 | 58 337 | 52 109 | 43 931 | 43 573 | –48.9 |
| Iceland | 2 106 | 2 729 | 3 384 | 3 302 | 3 272 | 55.4 |
| Ireland | 32 769 | 45 123 | 41 558 | 37 049 | 36 559 | 11.6 |
| Italy | 436 204 | 465 175 | 428 880 | 362 064 | 342 827 | –21.4 |
| Japan | 1 155 994 | 1 274 298 | 1 212 970 | 1 311 509 | 1 265 491 | 9.5 |
| Latvia ^a | 19 697 | 7 070 | 8 528 | 7 332 | 7 139 | –63.8 |
| Liechtenstein | 199 | 217 | 191 | 193 | 162 | –18.7 |
| Lithuania ^a | 35 813 | 11 802 | 13 619 | 12 988 | 12 733 | –64.4 |
| Luxembourg | 11 962 | 8 819 | 11 294 | 10 305 | 9 830 | –17.8 |
| Malta | 1 860 | 2 414 | 2 691 | 2 476 | 2 484 | 33.5 |
| Monaco | | | | | | |
| Netherlands | 162 498 | 172 060 | 182 530 | 165 476 | 157 790 | –2.9 |
| New Zealand | 25 420 | 32 356 | 35 017 | 35 094 | 35 617 | 40.1 |
| Norway | 35 695 | 42 194 | 45 832 | 44 307 | 43 867 | 22.9 |
| Poland ^{a, b} | 473 955 | 319 120 | 334 026 | 322 440 | 310 307 | –34.5 |
| Portugal | 45 175 | 65 764 | 52 430 | 47 482 | 47 215 | 4.5 |
| Romania ^{a, b} | 211 194 | 95 189 | 80 794 | 74 054 | 74 010 | –65.0 |
| Russian Federation ^a | 2 590 118 | 1 504 543 | 1 662 961 | 1 667 036 | 1 671 942 | –35.4 |
| Slovakia ^a | 61 838 | 41 155 | 38 386 | 35 395 | 33 387 | –46.0 |
| Slovenia ^{a, b} | 16 663 | 15 460 | 16 363 | 15 149 | 13 490 | –19.0 |
| Spain | 230 155 | 311 600 | 283 581 | 252 260 | 253 467 | 10.1 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|-----------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Sweden | 57 547 | 54 730 | 53 058 | 44 899 | 43 405 | -24.6 |
| Switzerland | 44 116 | 43 546 | 45 027 | 43 182 | 39 265 | -11.0 |
| Turkey ^d | 146 751 | 232 549 | 320 357 | 354 961 | 382 213 | 160.5 |
| Ukraine ^a | 693 025 | 271 430 | 287 114 | 287 436 | 247 561 | -64.3 |
| United Kingdom | 596 398 | 561 281 | 507 596 | 475 832 | 434 795 | -27.1 |
| United States | 5 115 095 | 5 992 438 | 5 688 756 | 5 502 551 | 5 556 007 | 8.6 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 28 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 14 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 6

Total anthropogenic CO₂ emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------|-----------------------|-----------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 388 184 | 398 921 | 410 549 | 385 760 | 380 036 | -2.1 |
| Austria | 49 429 | 49 343 | 65 988 | 62 737 | 58 685 | 18.7 |
| Belarus ^a | 73 971 | 26 224 | 34 951 | 38 094 | 43 416 | -41.3 |
| Belgium | 117 628 | 124 515 | 110 066 | 97 610 | 92 179 | -21.6 |
| Bulgaria ^{a, b} | 72 612 | 34 619 | 38 241 | 32 287 | 33 744 | -53.5 |
| Canada | 369 462 | 486 952 | 591 399 | 533 659 | 622 813 | 68.6 |
| Croatia ^a | 16 709 | 11 455 | 13 938 | 11 801 | 11 007 | -34.1 |
| Cyprus | 4 049 | 6 571 | 7 363 | 5 797 | 6 226 | 53.8 |
| Czechia ^a | 155 063 | 116 937 | 108 425 | 98 497 | 93 276 | -39.8 |
| Denmark | 60 511 | 58 825 | 50 322 | 43 775 | 38 770 | -35.9 |
| Estonia ^a | 28 538 | 16 094 | 12 487 | 18 911 | 18 334 | -35.8 |
| European Union ^c | 4 191 449 | 3 830 267 | 3 594 040 | 3 308 842 | 3 138 531 | -25.1 |
| Finland | 38 118 | 30 012 | 34 433 | 29 324 | 24 642 | -35.4 |
| France | 366 474 | 380 256 | 351 870 | 313 115 | 287 115 | -21.7 |
| Germany | 1 017 974 | 859 579 | 814 220 | 819 721 | 776 170 | -23.8 |
| Greece | 81 058 | 100 912 | 93 757 | 79 745 | 76 381 | -5.8 |
| Hungary ^{a, b} | 83 427 | 58 030 | 48 338 | 40 769 | 38 907 | -53.4 |
| Iceland | 9 800 | 10 449 | 11 366 | 11 289 | 11 252 | 14.8 |
| Ireland | 38 605 | 51 011 | 45 804 | 41 193 | 41 010 | 6.2 |
| Italy | 427 652 | 444 563 | 393 526 | 330 325 | 315 134 | -26.3 |
| Japan | 1 096 387 | 1 187 205 | 1 143 603 | 1 246 223 | 1 203 768 | 9.8 |
| Latvia ^a | 10 391 | -570 | 9 150 | 7 484 | 10 272 | -1.1 |
| Liechtenstein | 203 | 225 | 205 | 204 | 173 | -15.0 |
| Lithuania ^a | 31 799 | 2 529 | 2 400 | 3 017 | 4 234 | -86.7 |
| Luxembourg | 12 009 | 8 113 | 11 138 | 9 764 | 9 367 | -22.0 |
| Malta | 1 858 | 2 412 | 2 688 | 2 473 | 2 481 | 33.5 |
| Monaco | | | | | | |
| Netherlands | 168 573 | 178 203 | 188 431 | 171 669 | 164 034 | -2.7 |
| New Zealand | -3 778 | 1 632 | 5 489 | 9 860 | 11 014 | -391.5 |
| Norway | 24 770 | 18 126 | 19 431 | 17 434 | 17 897 | -27.7 |
| Poland ^{a, b} | 457 907 | 285 649 | 301 345 | 281 497 | 277 704 | -39.4 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|-----------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Portugal | 46 178 | 59 126 | 40 510 | 38 477 | 36 557 | -20.8 |
| Romania ^{a, b} | 193 626 | 70 645 | 60 455 | 53 977 | 53 908 | -72.2 |
| Russian Federation ^a | 2 723 379 | 1 123 808 | 1 080 458 | 1 109 860 | 1 123 801 | -58.7 |
| Slovakia ^a | 52 759 | 31 385 | 32 334 | 27 293 | 27 221 | -48.4 |
| Slovenia ^{a, b} | 12 035 | 7 471 | 9 136 | 8 249 | 6 579 | -45.3 |
| Spain | 204 351 | 276 258 | 249 818 | 219 787 | 221 501 | 8.4 |
| Sweden | 19 006 | 14 968 | 6 405 | 898 | -3 451 | -118.2 |
| Switzerland | 43 122 | 48 368 | 42 849 | 41 284 | 38 236 | -11.3 |
| Turkey ^d | 116 521 | 196 334 | 273 163 | 296 540 | 322 333 | 176.6 |
| Ukraine ^a | 646 830 | 230 136 | 255 388 | 272 696 | 234 409 | -63.8 |
| United Kingdom | 595 546 | 557 301 | 498 981 | 466 449 | 425 070 | -28.6 |
| United States | 4 370 240 | 5 293 061 | 4 914 071 | 4 727 892 | 4 778 456 | 9.3 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 32 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 10 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 7

Total anthropogenic CH₄ emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------|-----------------------|---------|---------|---------|---------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 118 769 | 111 520 | 99 448 | 99 857 | 98 076 | -17.4 |
| Austria | 10 599 | 8 466 | 7 183 | 6 757 | 6 623 | -37.5 |
| Belarus ^a | 17 944 | 12 923 | 17 109 | 18 724 | 18 599 | 3.6 |
| Belgium | 12 040 | 10 827 | 8 625 | 8 098 | 8 048 | -33.2 |
| Bulgaria ^{a, b} | 16 619 | 9 219 | 7 539 | 7 362 | 7 326 | -55.9 |
| Canada | 95 378 | 120 725 | 103 730 | 107 063 | 108 437 | 13.7 |
| Croatia ^a | 3 771 | 2 785 | 3 244 | 3 130 | 3 080 | -18.3 |
| Cyprus | 664 | 815 | 893 | 860 | 864 | 30.1 |
| Czechia ^a | 22 446 | 14 430 | 13 655 | 13 129 | 13 239 | -41.0 |
| Denmark | 8 083 | 8 355 | 7 787 | 7 381 | 7 363 | -8.9 |
| Estonia ^a | 1 912 | 1 237 | 1 183 | 1 133 | 1 102 | -42.4 |
| European Union ^c | 734 491 | 609 441 | 484 705 | 458 526 | 452 696 | -38.4 |
| Finland | 7 745 | 6 661 | 5 487 | 5 123 | 5 017 | -35.2 |
| France | 68 916 | 70 805 | 62 526 | 59 044 | 59 762 | -13.3 |
| Germany | 117 567 | 86 188 | 57 123 | 56 112 | 54 752 | -53.4 |
| Greece | 12 645 | 12 934 | 11 647 | 11 260 | 11 191 | -11.5 |
| Hungary ^{a, b} | 12 660 | 8 958 | 8 037 | 7 619 | 7 614 | -39.9 |
| Iceland | 522 | 559 | 584 | 546 | 592 | 13.6 |
| Ireland | 14 882 | 14 532 | 12 633 | 13 225 | 13 433 | -9.7 |
| Italy | 54 531 | 55 515 | 47 942 | 44 074 | 43 252 | -20.7 |
| Japan | 48 582 | 41 474 | 38 272 | 36 066 | 35 482 | -27.0 |
| Latvia ^a | 3 671 | 1 923 | 1 950 | 2 010 | 2 082 | -43.3 |
| Liechtenstein | 19 | 17 | 19 | 19 | 21 | 9.3 |
| Lithuania ^a | 6 906 | 3 715 | 3 648 | 3 387 | 3 442 | -50.2 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|---------|---------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Luxembourg | 620 | 605 | 597 | 563 | 570 | -8.0 |
| Malta | 78 | 130 | 197 | 189 | 197 | 151.0 |
| Monaco | | | | | | |
| Netherlands | 32 906 | 25 342 | 19 991 | 19 167 | 18 772 | -43.0 |
| New Zealand | 32 158 | 35 269 | 34 058 | 34 616 | 34 813 | 8.3 |
| Norway | 6 024 | 5 954 | 5 499 | 5 313 | 5 340 | -11.4 |
| Poland ^{a, b} | 76 734 | 49 403 | 43 166 | 42 357 | 41 330 | -46.1 |
| Portugal | 11 321 | 13 316 | 12 681 | 12 135 | 11 961 | 5.7 |
| Romania ^{a, b} | 71 154 | 36 205 | 29 683 | 29 124 | 29 032 | -59.2 |
| Russian Federation ^a | 1 114 636 | 792 249 | 996 955 | 1 028 388 | 1 022 151 | -8.3 |
| Slovakia ^a | 7 121 | 5 423 | 4 708 | 4 556 | 4 363 | -38.7 |
| Slovenia ^{a, b} | 2 556 | 2 459 | 2 188 | 2 080 | 1 979 | -22.6 |
| Spain | 31 750 | 38 018 | 38 949 | 38 085 | 38 166 | 20.2 |
| Sweden | 7 990 | 7 192 | 5 688 | 5 278 | 5 158 | -35.4 |
| Switzerland | 6 091 | 5 392 | 5 274 | 5 097 | 5 097 | -16.3 |
| Turkey ^d | 43 820 | 44 822 | 51 415 | 56 177 | 57 138 | 30.4 |
| Ukraine ^a | 198 026 | 117 374 | 84 804 | 75 256 | 69 054 | -65.1 |
| United Kingdom | 137 608 | 114 951 | 66 695 | 56 196 | 53 891 | -60.8 |
| United States | 773 855 | 717 474 | 722 411 | 721 475 | 730 829 | -5.6 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 32 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 10 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 8

Total anthropogenic CH₄ emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------|-----------------------|---------|---------|---------|---------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 130 782 | 122 621 | 109 287 | 109 025 | 107 688 | -17.7 |
| Austria | 10 599 | 8 466 | 7 183 | 6 758 | 6 623 | -37.5 |
| Belarus ^a | 17 953 | 12 932 | 17 115 | 18 730 | 18 606 | 3.6 |
| Belgium | 12 041 | 10 827 | 8 625 | 8 098 | 8 048 | -33.2 |
| Bulgaria ^{a, b} | 16 620 | 9 354 | 7 555 | 7 369 | 7 328 | -55.9 |
| Canada | 99 996 | 123 301 | 115 913 | 113 655 | 123 872 | 23.9 |
| Croatia ^a | 3 772 | 2 882 | 3 245 | 3 132 | 3 081 | -18.3 |
| Cyprus | 664 | 820 | 893 | 861 | 865 | 30.2 |
| Czechia ^a | 22 563 | 14 538 | 13 805 | 13 195 | 13 312 | -41.0 |
| Denmark | 8 098 | 8 414 | 7 946 | 7 577 | 7 605 | -6.1 |
| Estonia ^a | 1 913 | 1 239 | 1 183 | 1 133 | 1 102 | -42.4 |
| European Union ^c | 741 230 | 616 454 | 490 147 | 463 427 | 457 775 | -38.2 |
| Finland | 9 284 | 8 011 | 6 467 | 6 044 | 5 938 | -36.0 |
| France | 69 851 | 72 413 | 63 697 | 60 077 | 60 827 | -12.9 |
| Germany | 118 443 | 87 059 | 57 991 | 56 978 | 55 617 | -53.0 |
| Greece | 12 707 | 13 140 | 11 664 | 11 276 | 11 201 | -11.9 |
| Hungary ^{a, b} | 12 685 | 8 984 | 8 046 | 7 630 | 7 631 | -39.8 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|---------|-----------|-----------|-----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Iceland | 2 896 | 2 905 | 2 856 | 2 804 | 2 847 | -1.7 |
| Ireland | 15 124 | 14 829 | 13 258 | 13 672 | 13 859 | -8.4 |
| Italy | 56 201 | 56 466 | 48 302 | 44 270 | 43 587 | -22.4 |
| Japan | 48 655 | 41 541 | 38 332 | 36 123 | 35 558 | -26.9 |
| Latvia ^a | 3 979 | 2 269 | 2 263 | 2 377 | 2 471 | -37.9 |
| Liechtenstein | 19 | 17 | 19 | 19 | 21 | 9.3 |
| Lithuania ^a | 6 909 | 3 719 | 3 649 | 3 388 | 3 445 | -50.1 |
| Luxembourg | 620 | 605 | 597 | 563 | 570 | -8.0 |
| Malta | 78 | 130 | 197 | 189 | 197 | 151.0 |
| Monaco | | | | | | |
| Netherlands | 32 906 | 25 342 | 19 991 | 19 167 | 18 772 | -43.0 |
| New Zealand | 32 251 | 35 355 | 34 170 | 34 682 | 34 888 | 8.2 |
| Norway | 6 168 | 6 101 | 5 650 | 5 462 | 5 490 | -11.0 |
| Poland ^{a, b} | 76 779 | 49 435 | 43 198 | 42 394 | 41 365 | -46.1 |
| Portugal | 11 525 | 13 500 | 12 832 | 12 290 | 11 977 | 3.9 |
| Romania ^{a, b} | 71 154 | 36 209 | 29 683 | 29 125 | 29 033 | -59.2 |
| Russian Federation ^a | 1 135 819 | 812 566 | 1 019 746 | 1 049 362 | 1 044 906 | -8.0 |
| Slovakia ^a | 7 129 | 5 434 | 4 722 | 4 565 | 4 380 | -38.6 |
| Slovenia ^{a, b} | 2 556 | 2 460 | 2 188 | 2 081 | 1 979 | -22.6 |
| Spain | 31 955 | 38 238 | 39 018 | 38 152 | 38 289 | 19.8 |
| Sweden | 8 450 | 7 655 | 6 157 | 5 754 | 5 664 | -33.0 |
| Switzerland | 6 116 | 5 404 | 5 285 | 5 108 | 5 108 | -16.5 |
| Turkey ^d | 43 820 | 44 822 | 51 415 | 56 177 | 57 138 | 30.4 |
| Ukraine ^a | 198 037 | 117 380 | 84 835 | 75 258 | 69 088 | -65.1 |
| United Kingdom | 137 626 | 114 985 | 66 729 | 56 221 | 53 922 | -60.8 |
| United States | 777 142 | 725 802 | 725 690 | 728 825 | 738 179 | -5.0 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 33 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 9 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 9
Total anthropogenic N₂O emissions without emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|--------------------------|-----------------------|--------|--------|--------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 15 346 | 18 949 | 19 698 | 19 756 | 20 085 | 30.9 |
| Austria | 4 293 | 4 302 | 3 330 | 3 361 | 3 427 | -20.2 |
| Belarus ^a | 15 075 | 11 350 | 12 440 | 12 799 | 12 678 | -15.9 |
| Belgium | 10 232 | 10 353 | 7 760 | 6 281 | 6 279 | -38.6 |
| Bulgaria ^{a, b} | 10 000 | 3 973 | 4 081 | 4 186 | 3 755 | -62.5 |
| Canada | 42 240 | 39 936 | 37 892 | 40 647 | 39 407 | -6.7 |
| Croatia ^a | 2 793 | 2 388 | 2 300 | 1 697 | 1 621 | -41.9 |
| Cyprus | 311 | 364 | 378 | 329 | 332 | 6.7 |
| Czechia ^a | 11 145 | 7 397 | 6 183 | 6 045 | 6 324 | -43.3 |
| Denmark | 7 814 | 6 837 | 5 137 | 5 114 | 5 085 | -34.9 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|---------|---------|---------|---------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Estonia ^a | 1 387 | 601 | 718 | 769 | 820 | -40.9 |
| European Union ^c | 388 663 | 309 753 | 244 135 | 237 361 | 239 890 | -38.3 |
| Finland | 6 329 | 5 622 | 4 677 | 4 589 | 4 626 | -26.9 |
| France | 67 665 | 56 512 | 43 317 | 41 715 | 43 031 | -36.4 |
| Germany | 64 409 | 42 584 | 36 295 | 37 364 | 38 038 | -40.9 |
| Greece | 7 403 | 6 346 | 5 527 | 4 670 | 4 686 | -36.7 |
| Hungary ^{a, b} | 11 404 | 5 621 | 4 055 | 4 599 | 4 504 | -60.5 |
| Iceland | 510 | 481 | 438 | 426 | 468 | -8.2 |
| Ireland | 8 402 | 8 640 | 7 032 | 7 085 | 6 985 | -16.9 |
| Italy | 27 427 | 29 717 | 19 946 | 19 100 | 18 585 | -32.2 |
| Japan | 30 812 | 28 999 | 22 312 | 21 478 | 20 848 | -32.3 |
| Latvia ^a | 2 888 | 1 420 | 1 712 | 1 859 | 1 912 | -33.8 |
| Liechtenstein | 11 | 10 | 10 | 10 | 10 | -7.0 |
| Lithuania ^a | 4 490 | 3 199 | 2 631 | 2 470 | 2 509 | -44.1 |
| Luxembourg | 289 | 288 | 270 | 269 | 296 | 2.5 |
| Malta | 61 | 76 | 65 | 68 | 68 | 11.0 |
| Monaco | | | | | | |
| Netherlands | 17 637 | 15 639 | 8 050 | 7 685 | 7 815 | -55.7 |
| New Zealand | 7 327 | 8 429 | 8 638 | 9 003 | 9 066 | 23.7 |
| Norway | 4 201 | 3 929 | 2 566 | 2 535 | 2 527 | -39.8 |
| Poland ^{a, b} | 29 032 | 22 272 | 19 571 | 20 140 | 19 746 | -32.0 |
| Portugal | 3 991 | 4 412 | 3 562 | 3 344 | 3 413 | -14.5 |
| Romania ^{a, b} | 18 416 | 9 344 | 7 526 | 7 297 | 7 033 | -61.8 |
| Russian Federation ^a | 183 230 | 98 830 | 94 881 | 89 934 | 90 171 | -50.8 |
| Slovakia ^a | 4 998 | 3 022 | 2 815 | 2 274 | 2 336 | -53.3 |
| Slovenia ^{a, b} | 933 | 1 012 | 776 | 752 | 759 | -18.6 |
| Spain | 19 761 | 23 386 | 19 729 | 18 914 | 19 967 | 1.0 |
| Sweden | 5 841 | 5 919 | 5 054 | 4 832 | 4 884 | -16.4 |
| Switzerland | 2 854 | 2 556 | 2 512 | 2 412 | 2 439 | -14.5 |
| Turkey ^d | 16 510 | 18 425 | 19 621 | 23 211 | 23 283 | 41.0 |
| Ukraine ^a | 54 329 | 23 868 | 27 914 | 36 167 | 35 573 | -34.5 |
| United Kingdom | 48 509 | 28 749 | 21 883 | 20 778 | 21 349 | -56.0 |
| United States | 406 229 | 401 400 | 410 314 | 403 350 | 403 501 | -0.7 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 34 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 1 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 7 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 10
Total anthropogenic N₂O emissions with emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|---------|---------|---------|---------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 21 630 | 24 244 | 26 373 | 24 075 | 24 274 | 12.2 |
| Austria | 4 308 | 4 316 | 3 348 | 3 380 | 3 446 | -20.0 |
| Belarus ^a | 17 150 | 12 558 | 14 069 | 14 475 | 14 238 | -17.0 |
| Belgium | 10 245 | 10 414 | 7 874 | 6 405 | 6 406 | -37.5 |
| Bulgaria ^{a, b} | 10 068 | 4 129 | 4 161 | 4 263 | 3 828 | -62.0 |
| Canada | 44 464 | 41 082 | 43 946 | 43 858 | 47 052 | 5.8 |
| Croatia ^a | 2 825 | 2 490 | 2 386 | 1 784 | 1 706 | -39.6 |
| Cyprus | 311 | 368 | 378 | 329 | 332 | 6.8 |
| Czechia ^a | 11 166 | 7 413 | 6 201 | 6 056 | 6 336 | -43.3 |
| Denmark | 7 841 | 6 864 | 5 164 | 5 143 | 5 114 | -34.8 |
| Estonia ^a | 1 388 | 603 | 725 | 776 | 827 | -40.4 |
| European Union ^c | 400 020 | 321 554 | 255 864 | 248 999 | 251 657 | -37.1 |
| Finland | 7 594 | 6 900 | 5 943 | 5 843 | 5 880 | -22.6 |
| France | 70 328 | 59 005 | 45 741 | 44 025 | 45 359 | -35.5 |
| Germany | 65 239 | 43 385 | 37 103 | 38 205 | 38 885 | -40.4 |
| Greece | 7 408 | 6 363 | 5 528 | 4 672 | 4 687 | -36.7 |
| Hungary ^{a, b} | 11 425 | 5 687 | 4 106 | 4 651 | 4 559 | -60.1 |
| Iceland | 1 938 | 1 964 | 2 039 | 2 053 | 2 102 | 8.5 |
| Ireland | 8 546 | 8 863 | 7 421 | 7 433 | 7 330 | -14.2 |
| Italy | 28 239 | 30 388 | 20 581 | 19 818 | 19 328 | -31.6 |
| Japan | 31 051 | 29 214 | 22 496 | 21 658 | 21 031 | -32.3 |
| Latvia ^a | 3 465 | 2 019 | 2 351 | 2 550 | 2 609 | -24.7 |
| Liechtenstein | 11 | 11 | 11 | 11 | 11 | -5.6 |
| Lithuania ^a | 4 931 | 3 520 | 2 989 | 2 838 | 2 895 | -41.3 |
| Luxembourg | 293 | 293 | 274 | 272 | 299 | 1.9 |
| Malta | 61 | 76 | 65 | 68 | 68 | 11.0 |
| Monaco | | | | | | |
| Netherlands | 17 642 | 15 701 | 8 156 | 7 802 | 7 938 | -55.0 |
| New Zealand | 7 504 | 8 629 | 8 788 | 9 131 | 9 179 | 22.3 |
| Norway | 4 511 | 4 276 | 2 945 | 2 916 | 2 908 | -35.5 |
| Poland ^{a, b} | 29 044 | 22 295 | 19 612 | 20 188 | 19 811 | -31.8 |
| Portugal | 4 532 | 4 861 | 3 925 | 3 709 | 3 757 | -17.1 |
| Romania ^{a, b} | 19 657 | 11 067 | 9 369 | 9 140 | 8 876 | -54.8 |
| Russian Federation ^a | 193 686 | 112 555 | 106 932 | 101 599 | 102 521 | -47.1 |
| Slovakia ^a | 5 077 | 3 062 | 2 840 | 2 296 | 2 363 | -53.5 |
| Slovenia ^{a, b} | 936 | 1 016 | 780 | 756 | 763 | -18.5 |
| Spain | 19 993 | 23 846 | 20 074 | 19 210 | 20 308 | 1.6 |
| Sweden | 6 949 | 7 083 | 6 360 | 6 108 | 6 167 | -11.3 |
| Switzerland | 2 939 | 2 632 | 2 582 | 2 481 | 2 508 | -14.7 |
| Turkey ^d | 16 510 | 18 425 | 19 621 | 23 211 | 23 283 | 41.0 |
| Ukraine ^a | 54 486 | 24 114 | 28 138 | 36 353 | 35 777 | -34.3 |
| United Kingdom | 49 594 | 29 773 | 22 653 | 21 508 | 22 075 | -55.5 |
| United States | 409 844 | 409 431 | 415 295 | 411 075 | 411 231 | 0.3 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 32 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 1 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 9 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 11

Total aggregate anthropogenic emissions of HFCs, PFCs, SF₆, MIX and NF₃, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|---------------------------------|-----------------------|---------|---------|---------|---------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 6 243 | 3 091 | 8 570 | 10 355 | 11 109 | 78.0 |
| Austria | 1 656 | 1 387 | 1 901 | 1 966 | 2 019 | 22.0 |
| Belarus ^a | 0.00 | 0.10 | 2.10 | 2.51 | 2.43 | |
| Belgium | 3 766 | 1 718 | 2 719 | 3 252 | 3 215 | -14.6 |
| Bulgaria ^{a, b} | 3 | 32 | 613 | 918 | 1 033 | |
| Canada | 11 755 | 11 289 | 9 777 | 10 620 | 10 475 | -10.9 |
| Croatia ^a | 1 251 | 211 | 553 | 584 | 590 | -52.9 |
| Cyprus | 0 | 21 | 246 | 324 | 320 | |
| Czechia ^a | 85 | 317 | 2 078 | 2 725 | 2 934 | 3 343.2 |
| Denmark | 42 | 789 | 1 027 | 952 | 877 | 1 968.1 |
| Estonia ^a | 0 | 82 | 177 | 208 | 219 | |
| European Union ^c | 71 144 | 77 329 | 113 398 | 120 801 | 122 069 | 71.6 |
| Finland | 53 | 599 | 1 843 | 1 650 | 1 788 | 3 291.5 |
| France | 11 831 | 12 028 | 18 861 | 20 414 | 20 472 | 73.0 |
| Germany | 13 167 | 13 088 | 13 735 | 14 298 | 14 553 | 10.5 |
| Greece | 1 376 | 5 388 | 4 524 | 5 828 | 5 898 | 328.6 |
| Hungary ^{a, b} | 377 | 641 | 1 323 | 1 405 | 1 534 | 306.7 |
| Iceland | 496 | 194 | 325 | 261 | 264 | -46.7 |
| Ireland | 35 | 955 | 1 012 | 1 123 | 1 212 | 3 339.0 |
| Italy | 3 758 | 4 073 | 11 656 | 13 650 | 13 924 | 270.5 |
| Japan | 35 355 | 41 942 | 31 348 | 38 830 | 42 042 | 18.9 |
| Latvia ^a | 0 | 21 | 172 | 213 | 221 | |
| Liechtenstein | 0 | 4 | 10 | 12 | 12 | |
| Lithuania ^a | 0 | 23 | 266 | 412 | 456 | |
| Luxembourg | 1 | 31 | 59 | 69 | 75 | 8 403.8 |
| Malta | 0 | 5 | 146 | 221 | 234 | |
| Monaco | | | | | | |
| Netherlands | 8 476 | 6 875 | 2 952 | 2 498 | 2 469 | -70.9 |
| New Zealand | 924 | 330 | 1 229 | 1 585 | 1 608 | 74.0 |
| Norway | 5 993 | 2 793 | 1 375 | 1 397 | 1 421 | -76.3 |
| Poland ^{a, b} | 147 | 1 481 | 6 835 | 8 154 | 8 654 | 5 776.5 |
| Portugal | 0 | 307 | 1 560 | 1 790 | 1 806 | |
| Romania ^{a, b} | 3 887 | 1 579 | 1 052 | 1 362 | 1 431 | -63.2 |
| Russian Federation ^a | 52 207 | 37 129 | 17 692 | 29 832 | 28 046 | -46.3 |
| Slovakia ^a | 315 | 113 | 574 | 567 | 571 | 81.4 |
| Slovenia ^{a, b} | 243 | 195 | 292 | 333 | 355 | 45.9 |
| Spain | 4 268 | 12 114 | 18 540 | 18 189 | 17 327 | 306.0 |
| Sweden | 540 | 1 027 | 1 198 | 931 | 935 | 73.2 |
| Switzerland | 254 | 820 | 1 550 | 1 818 | 1 804 | 611.6 |
| Turkey ^d | 693 | 1 015 | 3 890 | 4 470 | 4 917 | 609.7 |
| Ukraine ^a | 236 | 136 | 775 | 881 | 851 | 260.9 |
| United Kingdom | 17 322 | 12 300 | 17 690 | 16 978 | 17 169 | -0.9 |
| United States | 101 966 | 147 661 | 163 976 | 172 604 | 180 109 | 76.6 |

Number of Parties showing a decrease in emissions by more than 1 per cent:

8

Number of Parties showing a change in emissions within 1 per cent:

1

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-------|-----------------------|------|------|------|------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |

Number of Parties showing an increase in emissions by more than 1 per cent:

24

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 12

Net anthropogenic CO₂ emissions/removals from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-------|-----------------------|------|------|------|------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |

| | | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|----------|
| Australia | 109 918 | 49 035 | 4 348 | -11 154 | -13 091 | -111.9 |
| Austria | -12 868 | -16 932 | -6 543 | -5 220 | -5 577 | -56.7 |
| Belarus ^a | -26 467 | -27 463 | -26 681 | -23 417 | -17 199 | -35.0 |
| Belgium | -2 355 | -1 801 | -4 090 | -4 135 | -4 147 | 76.1 |
| Bulgaria ^{a, b} | -15 344 | -10 422 | -9 346 | -10 193 | -11 339 | -26.1 |
| Canada | -94 032 | -85 338 | 36 396 | -39 435 | 48 713 | -151.8 |
| Croatia ^a | -6 681 | -8 334 | -7 246 | -6 558 | -6 600 | -1.2 |
| Cyprus | -614 | -568 | -641 | -652 | -652 | 6.2 |
| Czechia ^a | -6 606 | -8 911 | -7 345 | -7 994 | -7 878 | 19.3 |
| Denmark | 6 205 | 4 676 | 1 329 | 2 238 | 1 309 | -78.9 |
| Estonia ^a | -8 128 | 952 | -5 346 | -656 | -584 | -92.8 |
| European Union ^c | -270 756 | -334 879 | -339 251 | -337 548 | -324 866 | 20.0 |
| Finland | -18 833 | -26 961 | -29 395 | -22 511 | -22 956 | 21.9 |
| France | -34 178 | -36 860 | -42 365 | -56 871 | -54 038 | 58.1 |
| Germany | -32 985 | -39 625 | -18 000 | -16 025 | -16 689 | -49.4 |
| Greece | -2 346 | -2 107 | -3 278 | -3 166 | -3 247 | 38.4 |
| Hungary ^{a, b} | -1 767 | -307 | -3 771 | -3 162 | -4 666 | 164.1 |
| Iceland | 7 694 | 7 720 | 7 983 | 7 987 | 7 980 | 3.7 |
| Ireland | 5 837 | 5 888 | 4 246 | 4 143 | 4 451 | -23.7 |
| Italy | -8 552 | -20 612 | -35 354 | -31 739 | -27 693 | 223.8 |
| Japan | -59 607 | -87 093 | -69 367 | -65 286 | -61 722 | 3.5 |
| Latvia ^a | -9 305 | -7 640 | 622 | 152 | 3 133 | -133.7 |
| Liechtenstein | 4 | 8 | 14 | 11 | 11 | 160.2 |
| Lithuania ^a | -4 014 | -9 273 | -11 219 | -9 971 | -8 499 | 111.7 |
| Luxembourg | 48 | -706 | -157 | -542 | -463 | -1 075.0 |
| Malta | -2.57 | -2.65 | -2.83 | -2.87 | -2.83 | 10.0 |
| Monaco | | | | | | |
| Netherlands | 6 075 | 6 143 | 5 901 | 6 193 | 6 245 | 2.8 |
| New Zealand | -29 198 | -30 724 | -29 528 | -25 234 | -24 602 | -15.7 |
| Norway | -10 925 | -24 067 | -26 401 | -26 873 | -25 971 | 137.7 |
| Poland ^{a, b} | -16 048 | -33 471 | -32 681 | -40 944 | -32 603 | 103.2 |
| Portugal | 1 003 | -6 638 | -11 920 | -9 005 | -10 658 | -1 162.7 |
| Romania ^{a, b} | -17 568 | -24 544 | -20 340 | -20 077 | -20 102 | 14.4 |
| Russian Federation ^a | 133 261 | -380 735 | -582 503 | -557 176 | -548 140 | -511.3 |
| Slovakia ^a | -9 078 | -9 770 | -6 052 | -8 102 | -6 166 | -32.1 |
| Slovenia ^{a, b} | -4 628 | -7 989 | -7 228 | -6 899 | -6 911 | 49.3 |
| Spain | -25 804 | -35 342 | -33 763 | -32 472 | -31 965 | 23.9 |
| Sweden | -38 540 | -39 763 | -46 653 | -44 001 | -46 856 | 21.6 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|----------|----------|----------|----------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Switzerland | -994 | 4 822 | -2 178 | -1 897 | -1 029 | 3.6 |
| Turkey ^d | -30 229 | -36 215 | -47 193 | -58 421 | -59 880 | 98.1 |
| Ukraine ^a | -46 195 | -41 293 | -31 725 | -14 741 | -13 152 | -71.5 |
| United Kingdom | -853 | -3 980 | -8 614 | -9 383 | -9 725 | 1 040.5 |
| United States | -744 855 | -699 377 | -774 685 | -774 659 | -777 550 | 4.4 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 17 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 25 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 13

Anthropogenic CH₄ emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------|-----------------------|--------|--------|-------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 12 013 | 11 101 | 9 840 | 9 167 | 9 612 | -20.0 |
| Austria | 0.47 | 0.10 | 0.11 | 0.21 | 0.13 | -72.0 |
| Belarus ^a | 8.43 | 9.72 | 5.73 | 5.72 | 7.28 | -13.7 |
| Belgium | 1 | 0 | | | | |
| Bulgaria ^{a, b} | 1.07 | 134.73 | 15.19 | 7.72 | 2.15 | 100.1 |
| Canada | 4 618 | 2 577 | 12 183 | 6 592 | 15 435 | 234.3 |
| Croatia ^a | 1.23 | 96.91 | 1.76 | 1.93 | 0.25 | -79.6 |
| Cyprus | 0.04 | 5.71 | 0.74 | 0.22 | 0.24 | 482.1 |
| Czechia ^a | 117 | 108 | 150 | 66 | 73 | -37.5 |
| Denmark | 15 | 59 | 159 | 196 | 242 | 1 500.8 |
| Estonia ^a | 0.35 | 1.41 | 0.13 | 0.08 | 0.11 | -67.0 |
| European Union ^c | 6 739 | 7 013 | 5 442 | 4 901 | 5 079 | -24.6 |
| Finland | 1 539 | 1 350 | 980 | 922 | 922 | -40.1 |
| France | 934 | 1 609 | 1 171 | 1 032 | 1 065 | 14.0 |
| Germany | 876 | 871 | 868 | 866 | 865 | -1.2 |
| Greece | 62 | 206 | 16 | 16 | 9 | -84.9 |
| Hungary ^{a, b} | 25 | 26 | 9 | 12 | 17 | -30.4 |
| Iceland | 2 374 | 2 346 | 2 272 | 2 258 | 2 254 | -5.1 |
| Ireland | 242 | 297 | 625 | 447 | 425 | 75.5 |
| Italy | 1 671 | 951 | 360 | 196 | 335 | -80.0 |
| Japan | 73 | 67 | 60 | 58 | 76 | 4.5 |
| Latvia ^a | 308 | 346 | 314 | 367 | 389 | 26.5 |
| Liechtenstein | | | | | | |
| Lithuania ^a | 2.88 | 3.93 | 1.24 | 0.80 | 2.95 | 2.5 |
| Luxembourg | | | | | | |
| Malta | | | | | | |
| Monaco | | | | | | |
| Netherlands | 0.20 | 0.24 | 0.27 | 0.28 | 0.28 | 40.7 |
| New Zealand | 93 | 86 | 113 | 66 | 75 | -19.3 |
| Norway | 144 | 148 | 151 | 150 | 150 | 4.8 |
| Poland ^{a, b} | 44 | 33 | 32 | 37 | 35 | -20.1 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|--------|--------|--------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Portugal | 204 | 185 | 152 | 154 | 16 | -92.1 |
| Romania ^{a, b} | 0.09 | 3.33 | 0.19 | 1.26 | 1.10 | 1 179.2 |
| Russian Federation ^a | 21 183 | 20 317 | 22 792 | 20 974 | 22 755 | 7.4 |
| Slovakia ^a | 7 | 11 | 15 | 9 | 17 | 130.5 |
| Slovenia ^{a, b} | | 0.90 | 0.48 | 0.46 | 0.13 | |
| Spain | 205 | 220 | 69 | 66 | 123 | -40.0 |
| Sweden | 461 | 462 | 469 | 476 | 506 | 9.9 |
| Switzerland | 24 | 11 | 11 | 11 | 11 | -53.9 |
| Turkey ^d | 0.03 | 0.06 | 0.01 | 0.03 | 0.01 | -72.9 |
| Ukraine ^a | 11 | 7 | 31 | 2 | 34 | 203.9 |
| United Kingdom | 18 | 34 | 34 | 26 | 31 | 73.9 |
| United States | 3 287 | 8 328 | 3 280 | 7 350 | 7 350 | 123.6 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 19 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 18 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 14

Anthropogenic N₂O emissions from land use, land-use change and forestry, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------|-----------------------|--------|--------|--------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | 6 285 | 5 295 | 6 674 | 4 318 | 4 189 | -33.3 |
| Austria | 15 | 14 | 18 | 19 | 19 | 23.8 |
| Belarus ^a | 2 075 | 1 207 | 1 629 | 1 676 | 1 560 | -24.8 |
| Belgium | 12 | 62 | 114 | 124 | 127 | 939.1 |
| Bulgaria ^{a, b} | 68 | 156 | 81 | 77 | 73 | 8.1 |
| Canada | 2 225 | 1 146 | 6 054 | 3 211 | 7 645 | 243.7 |
| Croatia ^a | 32 | 102 | 85 | 86 | 85 | 166.5 |
| Cyprus | 0.03 | 3.76 | 0.49 | 0.15 | 0.16 | 482.1 |
| Czechia ^a | 21 | 15 | 18 | 12 | 12 | -40.7 |
| Denmark | 27 | 26 | 27 | 29 | 30 | 11.6 |
| Estonia ^a | 1.51 | 1.69 | 6.86 | 7.32 | 7.37 | 387.9 |
| European Union ^c | 11 357 | 11 801 | 11 729 | 11 637 | 11 766 | 3.6 |
| Finland | 1 266 | 1 278 | 1 267 | 1 254 | 1 254 | -0.9 |
| France | 2 663 | 2 492 | 2 425 | 2 309 | 2 327 | -12.6 |
| Germany | 830 | 801 | 809 | 841 | 847 | 2.0 |
| Greece | 5.10 | 16.87 | 1.35 | 1.33 | 0.80 | -84.4 |
| Hungary ^{a, b} | 21 | 66 | 51 | 52 | 55 | 159.6 |
| Iceland | 1 428 | 1 484 | 1 602 | 1 627 | 1 634 | 14.5 |
| Ireland | 144 | 222 | 389 | 348 | 345 | 140.3 |
| Italy | 812 | 671 | 635 | 718 | 743 | -8.5 |
| Japan | 239 | 215 | 184 | 181 | 183 | -23.6 |
| Latvia ^a | 576 | 598 | 640 | 691 | 698 | 21.1 |
| Liechtenstein | 0.31 | 0.35 | 0.43 | 0.46 | 0.45 | 44.2 |
| Lithuania ^a | 441 | 321 | 358 | 368 | 387 | -12.3 |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|--------|--------|--------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Luxembourg | 4.62 | 4.57 | 3.62 | 3.03 | 2.83 | -38.7 |
| Malta | | | | | | |
| Monaco | | | | | | |
| Netherlands | 6 | 62 | 106 | 117 | 123 | 2 033.1 |
| New Zealand | 177 | 200 | 149 | 128 | 113 | -36.4 |
| Norway | 310 | 347 | 379 | 381 | 380 | 22.5 |
| Poland ^{a, b} | 11 | 24 | 41 | 48 | 65 | 471.8 |
| Portugal | 541 | 449 | 364 | 366 | 344 | -36.4 |
| Romania ^{a, b} | 1 241 | 1 723 | 1 843 | 1 843 | 1 843 | 48.5 |
| Russian Federation ^a | 10 457 | 13 724 | 12 050 | 11 665 | 12 350 | 18.1 |
| Slovakia ^a | 80 | 40 | 25 | 22 | 28 | -65.5 |
| Slovenia ^{a, b} | 3.31 | 3.81 | 4.19 | 4.09 | 4.02 | 21.4 |
| Spain | 232 | 460 | 345 | 297 | 342 | 47.2 |
| Sweden | 1 108 | 1 164 | 1 306 | 1 276 | 1 283 | 15.8 |
| Switzerland | 85 | 76 | 70 | 70 | 69 | -19.4 |
| Turkey ^d | 0.02 | 0.04 | 0.01 | 0.02 | 0.01 | -72.9 |
| Ukraine ^a | 157 | 246 | 225 | 186 | 204 | 29.8 |
| United Kingdom | 1 085 | 1 023 | 770 | 731 | 727 | -33.0 |
| United States | 3 615 | 8 031 | 4 981 | 7 725 | 7 730 | 113.8 |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 15 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 1 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 25 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.

Table 15
Indirect CO₂ emissions, 1990, 2000, 2010, 2013 and 2014

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|--------------------------|-----------------------|-------|--------|-------|--------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Australia | | | | | | |
| Austria | | | | | | |
| Belarus ^a | | | | | | |
| Belgium | | | | | | |
| Bulgaria ^{a, b} | | | | | | |
| Canada | 4 042 | 1 750 | 11 775 | 5 999 | 14 753 | 265.0 |
| Croatia ^a | | | | | | |
| Cyprus | | | | | | |
| Czechia ^a | 3 917 | 2 905 | 2 489 | 2 347 | 2 234 | -43.0 |
| Denmark | 1 225 | 877 | 556 | 451 | 421 | -65.6 |
| Estonia ^a | | | | | | |
| European Union | 8 342 | 6 300 | 4 619 | 4 295 | 4 105 | -50.8 |
| Finland | 262 | 154 | 96 | 80 | 76 | -70.9 |
| France | 1 992 | 1 755 | 1 033 | 993 | 952 | -52.2 |
| Germany | | | | | | |
| Greece | | | | | | |
| Hungary ^{a, b} | | | | | | |
| Iceland | | | | | | |

| Party | kt CO ₂ eq | | | | | Change from 1990 to 2014 (%) |
|-----------------------------------------------------------------------------|-----------------------|------|------|------|------|---------------------------------|
| | 1990 | 2000 | 2010 | 2013 | 2014 | |
| Ireland | 81 | 74 | 64 | 65 | 65 | -20.1 |
| Italy | | | | | | |
| Japan | | | | | | |
| Latvia ^a | 43 | 26 | 16 | 15 | 20 | -53.5 |
| Liechtenstein | | | | | | |
| Lithuania ^a | | | | | | |
| Luxembourg | | | | | | |
| Malta | | | | | | |
| Monaco | | | | | | |
| Netherlands | 666 | 335 | 237 | 214 | 211 | -68.3 |
| New Zealand | | | | | | |
| Norway | | | | | | |
| Poland ^{a, b} | | | | | | |
| Portugal | 157 | 176 | 132 | 133 | 128 | -18.8 |
| Romania ^{a, b} | | | | | | |
| Russian Federation ^a | | | | | | |
| Slovakia ^a | | | | | | |
| Slovenia ^{a, b} | | | | | | |
| Spain | | | | | | |
| Sweden | | | | | | |
| Switzerland | 418 | 190 | 125 | 121 | 121 | -71.1 |
| Turkey ^d | | | | | | |
| Ukraine ^a | | | | | | |
| United Kingdom | | | | | | |
| United States | | | | | | |
| Number of Parties showing a decrease in emissions by more than 1 per cent: | | | | | | 10 |
| Number of Parties showing a change in emissions within 1 per cent: | | | | | | 0 |
| Number of Parties showing an increase in emissions by more than 1 per cent: | | | | | | 1 |

^a A Party with an economy in transition.

^b Data for the base year defined by decisions 9/CP.2 and 11/CP.4 (Bulgaria (1988), Hungary (average of 1985–1987), Poland (1988), Romania (1989) and Slovenia (1986)) are used for this Party instead of 1990 data.

^c Emission estimates of the European Union are as reported for its 28 member States as a group and are reported separately from those of each individual member State.

^d Decision 26/CP.7 invited Parties to recognize the special circumstances of Turkey, which place it in a situation different from that of other Parties included in Annex I to the Convention.